Factors Which Related to Safety Behavior of Ironworkers in Thamrin Nine Phase II Project PT. Total Building Persada TBK 2019

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Abstract: Human behavior related to safety is an approach to analyze what is needed to make safe behavior to reduce risky behavior. This research was conducted to find out analyzing the factors related to the safety behavior of ironworkers in the Thamrin Nine Phase II Project PT. Total Bangun Persada in 2019. This research uses a quantitative approach with a cross-sectional design. Data collection methods with questionnaires, interviews, and observations. Sampling is done by a simple random sampling technique for ironworkers. Bivariate results with Chi-Square test stated that there was a significant relationship between attitude (PR = 1,732; CI = 1,076- 2,789), perception (PR = 2,021; CI = 1,245 - 3,282), supervision (PR = 1,816; CI = 1,129 - 2,921) to the safety behavior of ironworkers in the Thamrin Nine Phase II Project of PT. Total Bangun Persada in 2019. While there is no relationship between knowledge, regulations. The researcher suggests that the HSE increase the K3 promotion program to workers, foremen, and supervisors so that they are more aware of behaving safely and carrying out their duties in accordance with their responsibilities.

1 INTRODUCTION

The construction industry is an industry that provides construction services that contribute a significant role in national development and is one of the significant contributing sectors to workplace accidents (Rijanto, 2010). The construction industry has unique characteristics which are different work locations, open, weather influenced, limited implementation time, dynamic, high physical endurance demands, and many uses of untrained labor, involving a large workforce, and industrial construction has many hazards and risks in its type of work. The biggest hazards include falling, falling over objects, being shocked, and fires. With the characteristics and scope as above, the construction industry is one that constructs the causes of work accidents (Taylor et al, 2006)Industrial work is a job that is dense with activities with a high level of risk, such as the work of lifting heavy objects, working at height, as well as work in confined spaces. The effects of these jobs in the event of an accident, including damage to the equipment used, loss of life of workers and the latter effect is called fatality. Overall these effects will affect the project

completion schedule, as well as the swelling of construction costs (Dewobroto, 2007).Based on data from the International Labor Organization (ILO) in 2017 that every year more than 1.1 million people die due to work accidents or work-related diseases in Asia and the Pacific. Accidents and illnesses caused by work not only affect the productivity and profits of the company. Asian, Pacific governments, workers and employers are increasing their efforts to prevent and prevent illness in the workplace (ILO, 2017). Based on data from the Social Security Organizing Agency (BPJS), employment figures for work accidents in Indonesia tend to continue to increase. A total of 110,272 cases of work accidents were recorded throughout 2016 or an increase in work accidents by about 10% compared to 2017 with 123 thousand cases nationwide (BPJS Employment, 2017). In the data of work accidents in the DKI Jakarta area based on data from the Jakarta Capital City BPJS from January to December 2017, work accident cases in the capital city are still quite high, namely 8,699 cases throughout 2017, specifically construction workers increased from 507 cases in the year 2016 to 555 cases throughout 2017 or an increase of 10% (BPJS Employment, 2017).In the process of forming and changing human

behavior, there are related factors, including internal factors such as attitudes, beliefs, feelings, thoughts, perceptions, and so on. While factors that come from outside (external) such as training, communication, regulation, supervision, and so on (Geller, 2001). Several approaches have been taken to reduce or prevent injuries accident. The importance of a behavior-based approach to safety (behavior-based safety) in an effort to improve work safety, both reactive or proactive. In a reactive perspective, safety efforts are tracked from risky or unsafe behavior that results in harm. While in a proactive perspective work safety efforts are traced from safe behavior that results in a successful work accident prevention (Geller, 2001).Based on the results of observations made by researchers in the iron unit of 20 workers, it was found that there are workers who have less worker's safety behavior, there are 12 workers (60%) of 20 workers who have less work safety behavior, based on the results of the worker questionnaire on the statement " pay attention to the conditions of the work environment before starting work 'and "wear gloves when working".

2 RESEARCH METHODS

The research conducted is cross-sectional. This research was conducted at the Thamrin Nine Phase II Project of PT. Total Bangun Persada in March - July 2019. The population in this study were all ironworkers who worked at the Thamrin Nine Phase II Project of PT. Total Bangun Persada, amounting to 150 people. Sampling in this study using simple random sampling with the selection of respondents carried out randomly to 86 people.

3 RESULT AND DISCUSSION

3.1 Research Result

3.1.1 Univariate Analysis

Description of Safety Behavior of Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

The distribution results show that the results of the analysis for safety behavior variables where the proportion is divided into two categories, namely bad safety behavior and good safety behavior,

obtained different results, namely the highest proportion of respondents with good safety behavior of 47 respondents (54.7%) while the lowest proportion are respondents with bad safety behavior as many as 39 respondents (45.3%).

Table 1: Distribution of Safety Behavior, Attitudes, Knowledge, Perception, Supervision and Regulation of Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019.

No.	Type of Analysis	Amount (n)	Percentage (%)
1.	Safety Behavior	86	100,0
	Bad	39	45,3
	Good	47	54,7
2.	Attitude	86	100,0
	Bad	39	45,3
	Good	47	54,7
3.	Knowledge	86	100,0
	Bad	29	33,7
	Good	57	66,3
4.	Perception	86	100,0
	Bad	38	44,2
	Good	48	55,8
5.	Supervision	86	100,0
	Bad	38	44,2
	Good	48	55,8
6.	Regulation	86	100,0
	Bad	15	17,4
	Good	71	82,6

Description of the Attitudes of Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

The distribution results show that the results of the analysis for attitude-behavior variables are divided into two categories namely bad attitudes and attitudes, different results are obtained in the distribution of ironworkers' attitudes namely the highest proportion is respondents who have good attitudes as many as 47 respondents (54.7%). While the lowest proportion were respondents who had bad attitudes as many as 39 respondents (45.3%).

Description of Iron Workers Knowledge in Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

The distribution results show that the analysis results for the knowledge variable are divided into two

categories namely bad knowledge and good knowledge, different results are obtained in the distribution of ironworker knowledge, namely the highest proportion of respondents who have good knowledge are 57 respondents (66.3%). While the lowest proportion were respondents who had poor knowledge of 29 respondents (33.7%).

Description of Iron Workers Supervision in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

The distribution results show that the analysis results for the ironworker supervision variable are divided into 2 categories namely poor supervision and good supervision, different results obtained in the distribution of supervision of ironworkers ie the highest proportion are respondents who have good supervision as many as 48 respondents (55.8%). While the lowest proportion were respondents who had poor supervision as many as 38 respondents (44.2%).

Description of Iron Worker Regulations in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

The distribution results show that the results of the analysis for the variable ironworker regulations are divided into two categories, namely bad rules and good regulations, obtained different results in the distribution of ironworkers regulations, namely the highest proportion of respondents who have good regulations, as many as 71 respondents (82.6%). While the lowest proportion were respondents who had bad regulations of 15 respondents (17.4%).

Description of Iron Workers' Perceptions in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

The distribution results show that the analysis results for the perception variable are divided into 2 categories namely bad perception and good perception, different results are obtained in the distribution of perception of ironworkers namely the highest proportion are respondents who have good perceptions of 48 respondents (55.8%). While the lowest proportion were respondents who had bad perceptions of 38 respondents (44.2%).

3.1.2 Bivariate Analysis

Related of Attitudes towards Safety Behavior of Iron Workers in Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of an analysis of 86 respondents it is known that the highest proportion of workers who have bad attitudes are workers who behave poorly as many as 23 people (59.0%), while the highest proportion of workers who have good attitudes are workers who behave well as many as 31 people (66, 0%).

Based on the chi-square test shows the value of the P-value is equal to 0.036 (p-value <0.05), it can be concluded that there is a relationship between attitudes towards safety behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019. The prevalence ratio value in this analysis is 1,732, meaning that workers who have a bad attitude risk 1,732 times to behave in bad safety compared to a good attitude.

Relationship of Knowledge to Safety Behavior of Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the analysis of 86 respondents, it is known that the highest proportion of workers with bad knowledge are 16 people (55.2%) who have good safety behavior, while the highest proportion of workers who have good knowledge are 31 people who have good safety behavior (54, 4%).

Based on the chi-square test by showing a value of P-value that is equal to 1,000 (p-value <0.05), it can be concluded that there is no relationship between knowledge of safety behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019. The prevalence ratio value in this analysis is 0.983 meaning that workers who have bad knowledge have a 0.983 times greater chance of being a protective factor for safety behavior compared to good knowledge.

Relationship Perceptions of Safety Behavior in Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of an analysis of 86 respondents it is known that the highest proportion of workers who have bad perceptions are workers who have bad

Table 2: Attitudes, Knowledge, Perception, Supervision, and Regulations with Safety Behavior for Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019.

No.	Variable	Category	Safety Behavior		P value	PR (95% CI)
			Bad	Good		
1.	Attitude	Bad	23 (59,0%)	16 (41,0%)	0,036	1,732 (1,076-2,789)
		Good	16 (34,0%)	31 (66,0%)		
2.	Knowledge	Bad	13 (44,8%)	16 (55,2%)	1,000	0,983 (0,600-1,610)
		Good	26 (45,6%)	31 (54,4%)		
3.	Perception	Bad	24 (63,2%)	14 (36,8%)	0,006	2,021 (1,245-3282)
		Good	15 (31,3%)	33 (68,8%)		
4.	Supervision	Bad	23 (60,5%)	15 (39,5%)	0,022	1,816 (1,129-2,2921)
		Good	16 (33,3%)	32 (66,7%)		
5.	Regulation	Bad	10 (66,7%)	5 (33,3%)	0,124	1,632 (1,036-2,571)
		Good	29 (40,8%)	42 (59,2%)		

safety behaviors as many as 24 people (63.2%), while the highest proportion of workers who have good perceptions are workers who have good safety behavior as many as 33 people (68, 8%).

Based on chi-square shows the value of P-value that is equal to 0.006 (p-value <0.05), it can be concluded that there is a relationship between perceptions of safety behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019. The prevalence ratio value in this analysis is 2.021, meaning that workers who have a bad perception are at risk of 2,021 times to behave in bad safety compared to a good perception.

Relationship of Supervision of Safety Behavior in Iron Workers at Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of an analysis of 86 respondents it is known that the highest proportion of workers who have poor supervision are workers who have bad safety behaviors as many as 23 people (60.5%), while the highest proportion of workers who have good supervision are workers who have good safety behavior as many as 32 people (66 7%).

Based on the chi-square test by showing a P-value of = 0.022 (p-value <0.05), it can be concluded that there is a relationship between supervision of safety behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019. The prevalence ratio value in this analysis is 1.816 meaning that workers who have poor supervision are 1,816 times more likely to behave in bad safety than good supervision.

The Relationship of Regulations to Safety Behavior of Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of an analysis of 86 respondents it is known that the highest proportion of workers who have bad regulations are those who behave poorly as many as 10 people (66.7%), while the highest proportion of workers who have good supervision are workers who behave well as many as 42 people (59, 2%).

Based on chi-square by showing the value of P-value that is equal to = 0.124 (p-value <0.05), it can be concluded that there is no relationship between regulations on safety behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019. The prevalence ratio value in this analysis is 1.632 meaning that workers who have poor supervision are 1,632 times at risk of behaving poorly compared to good regulations.

3.2 Discussion

3.2.1 Univariate Analysis

Description of Safety Behavior of Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of research that has been done regarding safety behavior, the results obtained are the opinions of respondents. Based on the results of the study, the highest proportion of safety behavior variables are workers with good safety behaviors as many as 47 people (54.7%). This is in accordance with research conducted by Halimah (2010) that the largest number of respondents were respondents who behaved safely namely 109 (83.9%).

Based on the results of a questionnaire stating that the safety behaviors that they often do with good safety behaviors are that my colleague and I always use all the PPE that is needed at work who have bad safety behaviors as many as 23 people (60.5%), while the highest proportion of workers who have good supervision are workers who have good safety behavior as many as 32 people (66 7%).

Based on the chi-square test by showing a P-value of = 0.022 (p-value <0.05), it can be concluded that there is a relationship between supervision of safety behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019. The prevalence ratio value in this analysis is 1.816 meaning that workers who have poor supervision are 1,816 times more likely to behave in bad safety than good supervision.

Based on chi-square by showing the value of P-value that is equal to = 0.124 (p-value <0.05), it can be concluded that there is no relationship between regulations on safety behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019. The prevalence ratio value in this analysis is 1.632 meaning that workers who have poor supervision are 1,632 times at risk of behaving poorly compared to good regulations.

Description of the Attitudes of Iron Workers in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of research that has been done, it is known that the proportion of respondents (96.54%), my colleague and I use procedures that are appropriate to my job (95.58%), my colleagues and I always use full-body harness when working at height (94.41%), I first check the work environment before starting work (90.69%), if the protection system is not installed, I report to the safety supervisor (88.60%).

Based on field observations related to safety behavior, many ironworkers behave well because there is a toolbox meeting program, in the toolbox meeting it is said that workers are always remembered to work with good safety behaviors and if there are workers who behave poorly, they will be subject to reprimands and sanctions in the form of fines or stop work.

Based on the results of the highest safety behavior questionnaire that uses procedures that are appropriate to the job, therefore researchers suggest in the toolbox meeting program to provide additional material on procedures for how to work with good safety behavior according to the type of work with a good attitude is higher than that of a bad attitude. The highest proportion of respondents with a good attitude is 47 respondents (54.7%).

The results of this study are in accordance with research conducted by Surianti, where it is known that the largest number of respondents are respondents who have a good attitude, 34 (60.7%).

Based on the results of a questionnaire stating that the attitude that they often do with a good attitude is to work in accordance with procedures because they follow existing regulations and policies (88.37%), working by following procedures can create conditions that are safe for yourself, others, and the environment (83.43%), I do not use PPE because my friend does not use PPE either (81.39%), working while joking and chatting are actions that can endanger ourselves or our friends (75%), I use PPE so as not to be scolded or reprimanded by supervisors (60.46%).

Based on the results of researchers' interviews with the company, the majority of respondents who have a good attitude is possible because of the background of respondents who have experience working in construction projects of PT. Total Bangun Persada. This is because the subcontract is a permanent partner of PT. Total Bangun Persada in the next project. So that workers who continue to work in the same conditions of the company form the attitude of the workers more positively because they already recognize how the company's conditions in applying OHS.

Based on the results of the highest attitude questionnaire that is working in accordance with procedures because it follows the existing regulations and policies, therefore the researcher suggests in the safety induction program, PT. Total

Bangun Persada and the safety subcontract always remind related to Standard Operating Procedures (SOPs), regulations, and policies to workers.

Description of Iron Workers Knowledge in Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of the research conducted, it is known that the proportion of respondents with good knowledge is higher than bad knowledge. The highest proportion of respondents with good knowledge is 57 respondents (66.3%). The results of this study are in accordance with research conducted by Fara (2017) which states that the proportion of good knowledge is more than bad knowledge in the amount of 30 respondents (81.1%).

Based on the results of the questionnaire, the question with the highest proportion of correct answers is the question of the definition of work safety (93.02%), if working at an altitude of more than 1.8 meters must use full-body harness (93.02%), work safety can be applied by themselves and other workers at work (91.86%), cutting iron using a bar cutter can cause the risk of being squeezed between 2 objects (90.69%), helmets are personal protective equipment to protect the head (88.37%).

Based on the observations of researchers in the field the program that has been implemented by the company is providing basic knowledge about K3 on a regular basis to workers. The program is conducted when the toolbox meeting is held every day and safety talk is held once a week, with the material provided is about basic OHS such as the objectives of OHS, types of hazards and sources of danger in each work unit and safe work procedures. Based on the results of the questionnaire, the results of the questions with the highest proportion are questions about the definition of work safety, therefore researchers suggest in the toolbox meeting program to always provide K3 understanding, safe work, and potential hazards.

Description of Iron Workers' Perceptions in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of research that has been done, it is known that the proportion of respondents with good perceptions is higher compared to bad perceptions. The proportion of respondents with good perception is 48 respondents (55.8%). The results of this study are consistent with research conducted by Fara (2017), in which it is known that the number of respondents was respondents who had a good perception of 26 respondents (70.3%).

Based on the results of a questionnaire stating that the perception that they often do with good perception with the highest proportion of answers is that we continue to work safely even though the work schedule is busy (81.10%), we who work here regard minor accidents as a natural thing from daily work - our day (79.94%), I feel uncomfortable when using PPE when working (79.94%), we who work here learn from experience to prevent accidents (79.36%), I feel uncomfortable when using PPE when working (72.09%).

Based on the results of the perception questionnaire there is the highest proportion that we continue to work safely even though the work schedule is busy, therefore researchers suggest in the safety patrol program to always supervise and conduct briefings to workers regarding Standard Operating Procedures (SOPs) and potential hazards in the field.

Based on the results of interviews conducted with workers, many workers feel safe working such as working in accordance with the Standard Operating Procedure (SOP) and there are K3 signs in the area of the work environment.

Description of Iron Workers Supervision in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of the research conducted, it is known that the proportion of respondents with good supervision is higher than that of poor supervision. The proportion of respondents with good supervision is 48 respondents (55.8%). The results of this study are in accordance with research conducted by Saputra (2017), it is known that the number of respondents was respondents who were well-supervised namely 42 respondents (63.6%).

Based on the results of a questionnaire stating that supervision that they often carry out with good supervision with the highest proportion of answers is that supervisors give reprimands/sanctions to workers who do not meet the standards (93.72%), the supervisor always checks the completeness of the personal protective equipment (PPE) before I started my job (93.25%), the supervisor supervised the work area (92.79%), I was always reminded to work according to Work Procedure Standards (89.53%), the supervisor at my workplace noticed his employees who were less fit when working (77.90%).

The program that has been implemented is a supervision program based on PT. Total Bangun Persada, where there are 2 supervisors namely PT. Total Bangun Persada as the main contractor and Sub-contractor safety officers (Subcon. PT. Total and Subkon safety officers supervise during safety patrol and safety inspection, they are required to reprimand or dismiss workers if the work does not comply with procedures and can pose a risk of accidents work, always reminding workers about the PPE and SOP in force, and the right to stop work when doing safety patrol in the work area.

Based on the results of the highest supervision questionnaire, the supervisor gives a reprimand/ sanction to workers who do not meet the standards, therefore researchers suggest in the safety patrol program to always reprimand workers who work not in accordance with procedures. Based on field observations, supervision is good enough. This supervision is carried out at any time by the safety of PT. Total and Subcon safety and if there are workers who are wrong then the supervisor will reprimand him directly.

Description of Iron Worker Regulations in the Thamrin Nine Phase II Project PT. Total Bangun Persada Tbk in 2019

Based on the results of research that has been done, it is known that the proportion of respondents with good regulations is higher than bad regulations. The proportion of respondents with good regulations is 71 respondents (82.6%). The results of this study are in accordance with research conducted by Saputra (2017), it is known that the number of respondents is good respondents who are about 35 respondents (53%).

Based on the results of a questionnaire stating that the rules they often do with good regulations with the highest proportion of answers are the rules and policies of PT. Total Bangun Persada is in writing and seen by me (98.25%), the company has a safety talk program that is routinely given (98.25%), I joined safety induction when I just started working at PT. Total Bangun Persada (97.09%), in the construction area signs, have been installed regarding the importance of using PPE in work (95.93%), PT. Total Bangun Persada has Work Procedure Standards for each work activity (94.76%).

Based on the results of the highest regulatory questionnaire namely the rules and policies of PT. Total Bangun Persada is written and seen by me, it can be said that the workers are familiar with the existing regulations. This is because, at the time before work, they follow the safety induction which contains regulations, policies, and standards of work procedures.

Based on observations and interviews of researchers with the company, the program that has been implemented is the socialization of regulations and policies to workers through safety induction activities, safety induction is required for workers who have just entered the project to find out all the regulations and policies on the project, this is due to the socialization regulations and policies are still not carried out to workers, socialization is only carried out during safety induction to new workers, but henceforth there is no ongoing socialization program as a refresher and a reminder to workers related to applicable regulations.

This can have an impact on workers and companies who later did not recognize the applicable regulations. This is according to the observations of researchers in the field with workers who have been working for months and months but when they have committed a violation, they excuse by not knowing or forgetting about project regulations.

3.2.2 Bivariate Analysis

Analysis of the Relationship between Attitudes and Safety Behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada in 2019

Based on the results of statistical tests conducted, it was found that there was a relationship between attitude and safety behavior in PT Total Bangun Persada's Thamrin Nine Phase II Project (p-value = 0.036). In addition, based on the results of the analysis it is known that the value of the Prevalence Ratio (PR) is 1,732 meaning that workers who have a bad attitude are 1,732 times more likely to behave in bad safety behavior compared to a good attitude. The results of this study are consistent with research conducted by Surianti which states there is a relationship between attitude and safety behavior.

Based on the results of researchers' interviews with the company, the majority of respondents who have a good attitude because the respondents have experience working on construction projects of PT. Total Bangun Persada. This is because the subcontract is a permanent partner of PT. Total Bangun Persada in the next project. So that workers who continue to work at the same company form the attitude of the workers more positively because they

already recognize how the company's conditions in applying OHS. Safety Patrol in the project is also less than optimal because they do safety patrol conducted by the safety subcontract only once.

Analysis of Relationship between Knowledge and Safety Behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada in 2019

Based on the results of statistical tests conducted, it was found that there was no relationship between knowledge and safety behavior in the Thamrin Nine Phase II Project of PT. Total Bangun Persada 2019 (p-value = 1,000). In addition, based on the results of the analysis it is known that the value of the Prevalence Ratio (PR) is 0.983 meaning that respondents who have bad knowledge have a 0.983 times greater chance of being a protective factor to safety behavior compared to good knowledge.

Based on the results of stratification on the knowledge variable with safety behavior stated as not related, but after seeing the results of stratification above this may be other factors, namely attitudes, perceptions, and supervision that affect safety behavior.

Analysis of the Relationship of Perception with Safety Behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada in 2019

Based on the results of statistical tests conducted, it was found that there was a relationship between perception and safety behavior in the Thamrin Nine Phase II Project of PT. Total Bangun Persada (p-value = 0.006). In addition, based on the results of the analysis it is known that the Prevalence Ratio (PR) is 2,021, meaning that workers who have a bad attitude have 2,021 times more risk of bad behavior than a good perception. Based on the results of interviews conducted with workers, many workers feel safe working but in the process of work can cause accidents, and Standard Operating Procedures (SOPs) are not present in the work environment area and the lack of OSH guidelines.

Analysis of the Relationship between Supervision and Safety Behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada in 2019

Based on the results of statistical tests conducted, it was found that there was a relationship between

supervision and safety behavior in the Thamrin Nine Phase II Project of PT. Total Bangun Persada (p-value = 0.022). In addition, based on the results of the analysis it is known that the value of the Prevalence Ratio (PR) is 1,816 meaning that workers who have a bad attitude have a 1,816 times the risk of having a bad safety behavior compared with good perception.

Based on field observations, there are still workers who, despite being reprimanded, do not obey and behave safely if only supervised because workers feel safe if they do not use Work Safety Equipment (APK), workers are not comfortable using Personal Protective Equipment (PPE), then researchers also found that several Subcon safety officers were not strict in supervising their workers because Subcon safety protected workers from warnings by PT. Total. The company has a policy related to workers who behave poorly in the form of reprimand to workers, then if they repeat the same mistakes, the company stops working and is given a fine to the worker.

Analysis of Relationship between Regulations and Safety Behavior in the Thamrin Nine Phase II Project PT. Total Bangun Persada in 2019

Based on the results of statistical tests conducted, it was found that there was no relationship between regulations and safety behavior in the Thamrin Nine Phase II Project of PT. Total Bangun Persada (p-value = 0.124). In addition, based on the results of the analysis it is known that the value of the Prevalence Ratio (PR) is 1,632 meaning that workers who have a bad attitude have the opportunity to be 1,632 times more at risk for bad safety behavior compared with good perception. The results of this study are in accordance with research conducted by Imami and Modjo (2014) which states there is no relationship between regulations and safety behavior.

Based on observations and interviews of researchers with the company, the program that has been implemented is the socialization of regulations and policies to workers through safety induction activities, safety induction is required for workers who have just entered the project to find out all the regulations and policies on the project, this is due to the socialization regulations and policies are still not carried out to workers, socialization is only carried out during safety induction to new workers, but henceforth there is no ongoing socialization program

as a refresher and a reminder to workers related to applicable regulations.

Based on the results of stratification on the regulatory variables with safety behaviors declared unrelated, but after seeing the results of the stratification above this may be other factors, namely attitudes, perceptions and supervision that make related.

4 CONCLUSIONS

Based on the results of research that has been done, the writer can conclude the following:

1. The distribution of respondents' safety behavior with the highest proportion is good safety behavior of 47 people (54.7%).
2. The distribution of respondents' attitudes with the highest proportion is respondents with good attitudes namely 47 respondents (54.7%).
3. The highest proportion of respondents' knowledge distribution is respondents with good knowledge, namely 57 respondents (66.3%).
4. The distribution of respondents' perceptions with the highest proportion is respondents with good perceptions of 48 respondents (55.8%).
5. The distribution of respondents' supervision with the highest proportion is respondents with good supervision, namely 48 respondents (55.8%).
6. The distribution of respondents' regulations with the highest proportion is respondents with good regulations, as many as 71 respondents (82.6%).
7. There is a relationship between attitude and safety behavior of ironworkers in the Thamrin Nine Phase II Project PT. Total Bangun Persada. The PR value of 1,732.
8. There is no relationship between the knowledge and safety behavior of ironworkers in the Thamrin Nine Phase II Project PT. Total Bangun Persada. The PR value of 0.983.
9. There is a relationship between the perception and safety behavior of ironworkers in the Thamrin Nine Phase II Project PT. Total Bangun Persada. The PR value of 2,021.
10. There is a relationship between supervision and safety behavior of ironworkers in the Thamrin Nine Phase II Project PT. Total Bangun Persada. The PR value of 1,816.
11. There is no relationship between the regulations and safety behavior of ironworkers

in the Thamrin Nine Phase II Project PT. Total Bangun Persada. The PR value of 1,632.

5 SUGGESTION

1. Conduct monitoring of behavior to workers carried out by Subkon Safety routinely at least 2 times a day, so that workers who still have negative attitudes can change their attitudes to be positive.
2. Sticking Standard Operating Procedure (SOP) in the work area and multiplying K3 signs. Thus, workers will emerge the perception that the work they do is in accordance with procedures and knows the potential hazards and risks in the work area.
3. Increasing the role of supervisors of safety subcontractors by reprimanding workers, inspecting workers in accordance with Standard Operating Procedures (SOP) and conducting a comprehensive evaluation on the performance of Subcon safety officers to provide an assessment of the performance of each Subcon safety.

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